



NUTRITION FOUNDATION OF INDIA

**NUTRITION PROGRAMMES
IN ORISSA STATE**

**Project funded by
Ministry of Human Resources Development,
Government of India**

SCIENTIFIC REPORT 5



Community Health Cell
Library and Documentation Unit
BANGALORE

NUTRITION FOUNDATION OF INDIA



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Abbreviations

Anganwadi	-	Child Care Centre
ANP	-	Applied Nutrition Programme
APP	-	Anti-poverty Programme
CDPO	-	Child Development Project Officer
ICDS	-	Integrated Child Development Service
IMR	-	Infant Mortality Rate
MDM	-	School Mid-day Meal Programme
NNMB	-	National Nutrition Monitoring Bureau
NP	-	Nutrition Programme
PEM	-	Protein Energy Malnutrition
SC	-	Scheduled Castes
SMP	-	School Meal Programme
SNP	-	Special Nutrition Programme
SRS	-	Sample Registration Scheme
ST	-	Scheduled Tribes
UGSNP	-	Upgraded Special Nutrition Programme
WFP	-	World Food Programme

Preface

Orissa is perhaps one of the poorest States of India. According to some estimates, Orissa's population below the so-called poverty line is almost 70 percent. Nearly two-thirds of the population is illiterate. Orissa's estimated infant mortality rate (IMR) of 135 (1985) is lower than the IMR of only one other State in the country — Uttar Pradesh (150). Its estimated annual death rate of 13.9 (1985) places it just above only two other States in the country — again Uttar Pradesh (15.8) and Bihar (14.9). Under the circumstances, it is not surprising that malnutrition is a pervasive problem in the State.

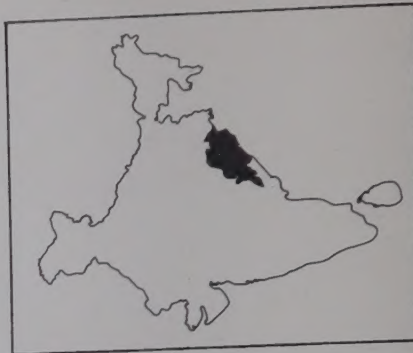
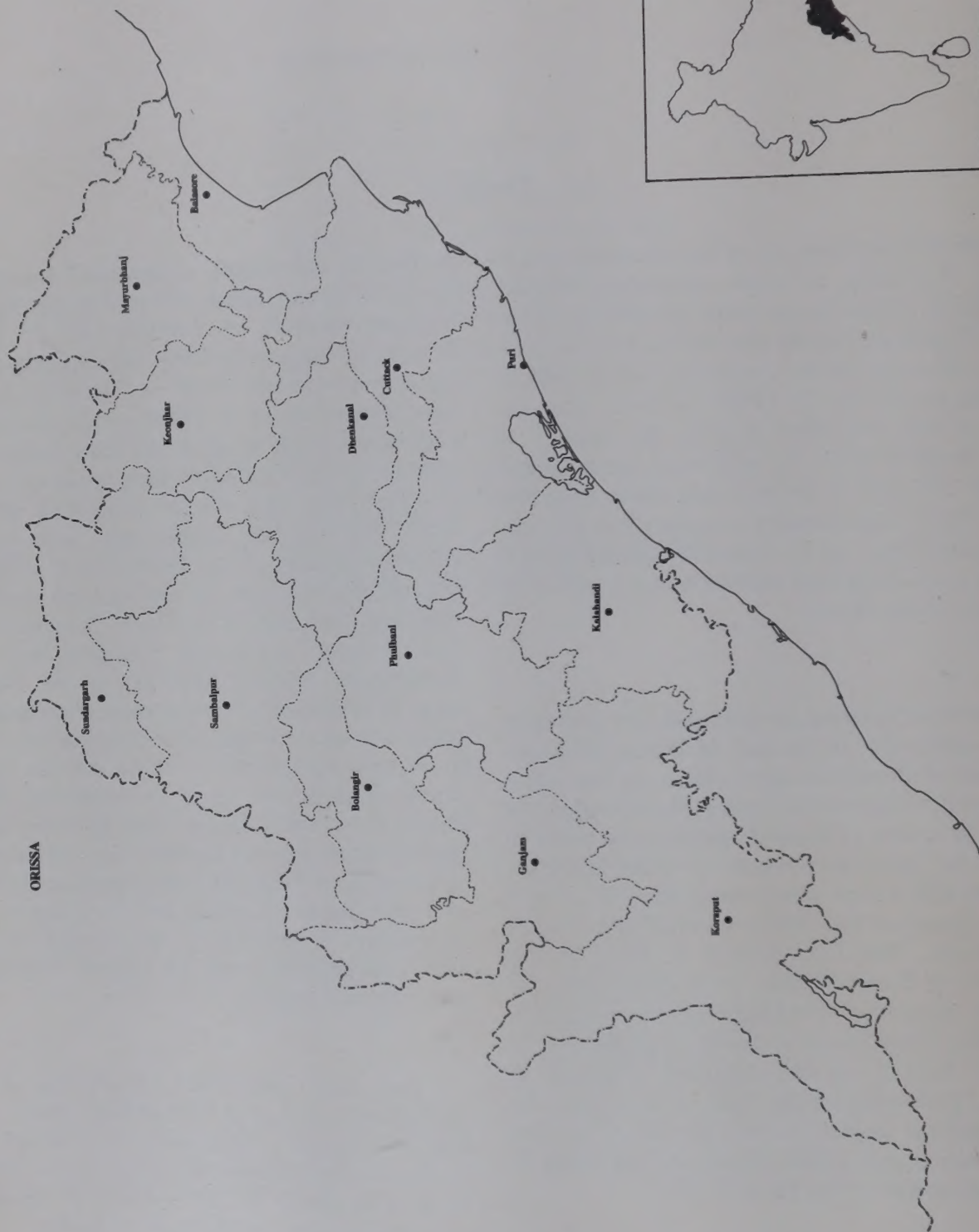
Several nutrition programmes are currently being undertaken in the State of Orissa. The Government of Orissa was apparently keen that some competent independent agency should undertake a careful review of these programmes in order to advise the State Government as to the future directions which these programmes should take and had approached the Government of India in this connection. The Government of India in the Ministry of Social Welfare (now the Ministry of Human Resources Development) requested the Nutrition Foundation of India to undertake "a critical analysis of the nutrition situation in Orissa, preferably on the basis of available data from various sources so that the State Government may adopt a well considered approach to the subject during the Seventh Plan".

The Nutrition Foundation of India was glad to respond positively to this request of the Government of India. The Foundation was helped in

its task by two highly experienced consultants, Dr. M.C. Swaminathan, former Deputy Director, National Institute of Nutrition and Dr. Shanti Ghosh, leading paediatrician and expert in maternal and child health problems. These two consultants visited Orissa on behalf of the Foundation and spent several weeks in the State travelling to different places, seeing projects in operation and in discussions with several concerned officers. They received full cooperation and support from the officers of the Government of Orissa. Special mention must be made of the assistance received from Mr. R.K. Rath, Secretary, Mr. S.K. Menon, Additional Secretary and Mrs. A.Agnihotri, Deputy Secretary, of the Department of Community Development and Rural Reconstruction. On behalf of the Foundation, I wish to express my thanks to these officers of the Orissa Government. I wish to express my special thanks to Mr. M.S. Dayal, Joint Secretary in the then Ministry of Social Welfare who was primarily responsible for requesting the Nutrition Foundation of India to undertake this assignment. The Foundation is grateful to the Consultants Dr. M.C. Swaminathan and Dr. Shanti Ghosh for their valuable reports.

This report carries the observations of the Consultants and the recommendations and suggestions of the Foundation. It is hoped that these recommendations and observations would be of some use to the Government of Orissa in restructuring their nutrition programmes.

C. Gopalan



Chapter 1

Current Status

M.C. Swaminathan

1.1. Population and Food Resources

The State of Orissa comprising 13 districts has a total population of about 26.4 million (1981 census) and ranks 11th in India in the matter of population. The lower population growth rate (2.02 percent) during 1971-81 against a national figure of 2.5 percent is a welcome feature for a backward State like Orissa.

The distribution of population in the different regions of the State is not uniform; the districts could be broadly classified into three groups.

- a) Western region – Sambalpur, Sundargarh, Bolangir, and Kalahandi.
- b) Coastal districts – Cuttack, Balasore, Puri and Ganjam.
- c) Inland districts – Koraput, Phulbani, Dhenkanal, Keonghar and Mayurbanj.

Scheduled Castes (SC) and Scheduled Tribes (ST)

Since the brunt of malnutrition is generally borne by these groups, some information regarding their distribution in the population may be relevant. Though there has been an absolute increase of population of SC and ST by about 14 lakh (SC — 5 lakh and ST — 9 lakh) between 1971-81, their proportion to the total population has declined from 38.2 to 37.1 percent. The district of Koraput has the largest population of SC + ST (68.3 percent) followed by Mayurbanj (64.3 percent) and Puri, the least (16.4 percent). Cuttack has the largest concentration of SC (21.2 per-

cent). Koraput, Mayurbanj and Sundargarh have a high concentration of ST. If the absolute numbers of the combined population of SC and ST are considered, the first four positions are occupied by Koraput, Mayurbanj, Sambalpur and Cuttack.

Urbanisation

Nearly 12 percent of the population live in urban areas showing an increase of 31 lakh during the decade 1971-81. Among the districts, Sundargarh is the most urbanised (30.6 percent) and Phulbani (5.3 percent) least.

Literacy

Literate population increased by 32.2 lakh during 1971-81, the percentage increasing from 26.2 to 34.2 percent. Among the districts, Puri (45.5), Cuttack (45.4), Balasore (42.1) have a relatively high rate of literacy and among the districts with the lowest levels of literacy are Koraput (16.11) and Kalahandi (19.92). In spite of the relatively favourable rate of growth of population and the improvement in literacy levels among some sections of the population, the general backwardness and poverty associated with the high proportion of SC and ST who constitute the poorest sections in the overall population, and the frequent occurrence of natural calamities like floods, drought, etc., have contributed to the continuance of the highly unsatisfactory state of health and nutrition prevailing in Orissa today.

Income and Level of Living

The per capita income of Orissa (base 70-71)

in 1981-82 was about Rs.564 and at current prices Rs.1308. As compared to all India, it was less by about 27 percent. Agriculture and related jobs provide 59.2 percent of the total income, and mining and minerals 15.5 percent.

National Sample Survey data on consumer expenditure show that during the period 1960-61 to 1973-74, the total per capita consumption had decreased by 8.2 percent and 17.3 percent in rural and urban areas of Orissa respectively. On the other hand, the expenditure on food during the same period (60-61 to 73-74) indicated a rise from 69 percent to 80.9 percent in rural and from 62.8 percent to 71.4 percent in urban areas. These trends reflect the worsening economy of the State and the deepening poverty among some sections of the population. The percentage of population below poverty line in Orissa is now believed to be about the highest among all the States of India (about 70 percent).

Food

Agricultural production constitutes an important component of the State income since more than 75 percent of the population is engaged in agricultural operation. Orissa has not only a considerable proportion of small land holdings but also a high proportion of landless labour varying from 30 percent to even more than 50 percent in different districts. Except for the districts Balasore and Cuttack, forests cover quite a proportion of the geographic area. Of the nett area sown (38.5 percent), only one-fifth is under irrigation. Thus, agricultural production is mainly under rain-fed conditions and mostly one crop is grown subject to the vagaries of the monsoon.

Rice is the staple crop and wide fluctuations in its production due to varying weather conditions affect the overall economy of the State. In 1981-82, 69 percent of the area under food grain was for rice, contributing roughly 78 percent of the total food grown. During 1983-84, the total food grain production in the State was about 70 lakh tonnes. The other food grains include wheat, ragi, maize and pulses. In recent years, pulses and oil seeds are reported to have shown trends

indicative of increased production. Such increase in production of food grain as has been achieved in the State is largely due to increase in area under cultivation and not due to increase in yield per hectare. The stated reasons for low yield are poor resources for providing agricultural inputs, lack of irrigation facilities and poor utilisation of advanced agricultural technology. The tribal population in the remote areas still follows the primitive "slash and burn", shifting or 'podu' cultivation.

However, the trend in production of food grains in normal seasons has always been a marginal surplus for the State as a whole (Table 1).

Reliable figures for production of other foods are not easily available. It is reported that production of fish, eggs, poultry and other animal products and other foodstuffs like milk, etc., are on the increase but not sufficient to meet the nutritional needs of the population as a whole.

Even though adequate amounts of food grains are produced for consumption within the State, it is reported that a considerable part is exported to other States. The marginal farmers, who are in the majority, produce on an average food that could meet just about four months of their requirement. Even this is not all kept for their own consumption. Part of the production is sold to meet other essential non-food needs. In effect, the majority of the subsistence farmers particularly in backward and predominantly tribal areas of the State do not seem to meet their own requirement of food for most of the year from their own production. They have necessarily to depend on such other resources as they can manage.

Export of food grains to other States, frequent natural calamities, poverty and high expenditure on food due perhaps to non-availability of non-food resources for income generation and preference for rice as a staple, all contribute to maldistribution of food among the rural community, particularly those belonging to the class of

small or marginal farmers and the landless, more so among the scheduled castes and tribal population.

The per capita production of food grain of Orissa works out to about 180 kg/year (normal requirement - 150 kg) and varies with the districts. The lowest is in Cuttack (105 kg) and the highest in Kalahandi (306 kg) and six of the 13 districts have food grain production levels lower than the population requirement (Table 1).

1.2 Health and Nutritional Status

Information on mortality trends in the population available in the Sample Registration Scheme (SRS) covering 150 villages indicates an Infant Mortality Rate (IMR) of 130 and a birth rate of about 33. The age specific childhood mortality rate (1-4 years) has been estimated to be about 11 (Table 2).

Most of the deaths in early infancy could be attributed to maternal factors and in late infancy to environmental factors (Table 3).

Respiratory and gastro-intestinal infections contribute substantially to mortality and morbidity among children from birth through the pre-school age. No reliable information is available on birth weights, but it can be presumed to be the same as in other parts of the country; low birth weight (less than 2,500 gm) babies would constitute roughly about 30 percent.

Poverty, ignorance about nutritional needs and faulty feeding habits and infections are mainly responsible for the prevalence of nutritional deficiency in late infancy and preschool age (Table 4).

Carefully planned and conducted sample surveys by the National Nutrition Monitoring Bureau (NNMB), during the period 1978-81 clearly indicate that undernutrition is widely prevalent among preschool children belonging to low

income groups. Diet and clinical nutrition surveys reveal that poor dietary intakes associated with high morbidity due to infections, infestations, etc. are largely responsible for the situation. Lack of purchasing power and non-availability of nutritious foods compel these segments to consume diets mainly based on cereals and/or millets, with very little amount of pulses and other foods. Within the family it is estimated that the intake of food is least among the very young children and inadequate to meet their needs.

Severe forms of Protein Energy Malnutrition (PEM) like kwashiorkor and marasmus are encountered in the community though their prevalence is low (less than 1 percent), marasmus being more commonly seen than kwashiorkor. Vitamin A deficiency and Vitamin B complex deficiencies are also seen. Anaemia in its mild and moderate form is widely prevalent among adult women and children. Severe anaemia is mostly encountered among expectant mothers. Data on haemoglobin levels in the population based on well designed surveys are not available. It is learnt that the ICMR is proposing to undertake a country-wide survey of anaemia to assess the impact of the currently implemented programme for the prevention of anaemia. It is hoped that this study will provide reliable data on the prevalence of anaemia in the State.

The mean body weights of preschool children in Orissa do not seem to differ very much from those generally observed in the rest of the country. Grades of malnutrition as conventionally assessed on the basis of body weight for age indicate that in Orissa, though there are wide variations within the State, the pattern observed generally conforms to what obtains in the rest of the country (Tables 5,6,7 and 8).

The mean body weights of adult women do not vary very much from those seen in the rest of the country, around 40-42 kg (NNMB 1978-82); however, data on the distribution of body weights are not available to permit meaningful comments on the nutritional status of women, except to state that they are generally poor.

Examination of a sample of 600 children and their mothers attending the feeding centres in the course of this study generally confirmed observations regarding poor level of nutrition of women and children in the State of Orissa. Seasonal factors also apparently play a part in determining the order of undernutrition.

Many remote areas in the State are not adequately covered by health services and in these areas the availability of food is also poor. In addition, ignorance about nutritional needs and wrong concepts about health care also are widely prevalent. Most deliveries, especially in the rural areas among Scheduled Castes and Scheduled Tribes, are being conducted in homes (not institutes and hospitals) by either untrained *dais* or relatives. (Tables 9 & 10)

1.3 Nutrition Programmes (NP)

Orissa was one of the States where in 1959-60 the expanded nutrition programme (ENP), later termed Applied Nutrition Programme (ANP), was initiated with the objective of demonstrating to the rural communities the value of local production and consumption of nutritious foods. The activities were centred around the production units of school gardens, community gardens, poultry units and fisheries; one of the components of this programme was the feeding operation in schools for school children, and for preschool children in community centres organised by community groups like women's clubs, youth clubs, etc.

Later in 1971 the special nutrition programme (SNP), a supplementary feeding programme for preschool children and expectant and nursing mothers, was initiated as a crash programme to meet the nutritional needs of the vulnerable segments. This was organised in both rural and urban areas and almost the entire tribal population was covered. Though local food was utilised to some extent, it was largely based on external food aid through CARE, WFP. Recently a decision has been taken to upgrade the SNP programme with provision of minimal health care to the beneficiaries.

With the experiences of implementing SNP it was soon realised that to achieve the desired objective of raising the nutritional level of vulnerable segments, it will be necessary to implement an integrated programme of child development with inputs to the child as well as the pregnant and lactating women. Thus the current concept of Integrated Child Development Services (ICDS) came into existence and presently 58 blocks are being covered under the ICDS scheme in Orissa (Table 11). Ultimately it is expected that the entire country will be covered by this programme in a phased manner depending on available resources.

In addition, programmes for the prevention of Vitamin A deficiency and resulting blindness among children, and for prevention of anaemia among women and children are being implemented by the Department of Health on a countrywide basis. Supplementation of Vitamin A at six monthly intervals to preschool children and distribution of iron and folic acid tablets to children and pregnant women are undertaken as a preventive measure at the community level, but the coverage tends to be inadequate and irregular.

Apart from these specific nutrition programmes, other ongoing programmes which include a wide range of anti-poverty programmes, development programmes based on agricultural production, food subsidies and distribution of essential commodities at fair prices through the public distribution system, family planning measures, improvement of environmental sanitation and drinking water facilities, also contribute to raising the level of health and nutritional status of poor socio-economic groups.

The current coverage of NP for the vulnerable segments in Orissa is given in Table 12.

A review of nutrition programmes in the country including ANP, SNP, etc. indicates that where these programmes are vigorously and faithfully implemented, results are satisfactory. Where

these programmes have failed to yield the desired results, reasons therefor could be summarised as follows:

- 1) Coverage too scattered, widespread and irregular to produce an impact.
- 2) Improper selection of beneficiaries: really vulnerable groups are not reached.
- 3) Programme restricted to feeding operation only.
- 4) Poor organisation, supervision with inadequate monitoring and internal evaluation.
- 5) Lack of coordination between agencies.
- 6) Absence of or inadequate health inputs.
- 7) Unawareness of objectives of programme at all levels.
- 8) Lack of educational effort.
- 9) Virtual absence of community participation.

As part of the present study, selected blocks in 11 districts of the State were visited. In the course of the visit, apart from observation on the functioning of the nutrition programmes, discussions were held with functionaries at all levels from the District administration down to the feeding centre and the community. Information was collected at the block level on coverage of various programmes related to nutrition and health of vulnerable segments of the population with the help of a questionnaire. Some of the observations arising from the brief study are presented below.

School Meal Programme (SMP)

The midday meal programme in schools is operated with CARE-donated food (wheat and vegetable oils) in all the districts of Orissa. Nearly 50 percent to over 80 percent of the primary schools are covered. A selected number of children in each school are allocated for the meal, but in practice, 80-100 percent of children in the schools partake of the meal. The SMP is expected to be in operation for a total period of 180 days in the year. In actual practice, however, the feeding is conducted on an average for only 75 percent of these days. The meal is consumed by children be-

longing to all sections of the community and not necessarily confined to the low income groups. It is claimed by functionaries in the programme that the programme has helped to *increase the attendance of the pupils* (normally about 70 percent) (Table 13) particularly of those belonging to the socially depressed classes. It is also reported to have increased social contact among children. Its impact in terms of nutrition, however, does not seem to be striking for the reasons mentioned above. All the same, there is universal demand for increase in coverage especially in areas where SC and ST are predominating and also where the schools are located far away from the dwellings.

A few observations may be of interest from the point of view of logistics and administration. It has been decided that SMP will not operate in schools which do not have the infrastructure or accommodation facilities, and in which the number of pupils is less than 20. In some areas it has been decided that in order to cover all the schools in the block, the operation of SMP will shift from year to year leaving out certain schools by rotation. This could prove counterproductive. The advantage gained in improving on paper the coverage in terms of area and thereby possibly increasing the enrolment, may be lost through increased drop-outs.

No attempt is being made to utilise the SMP to promote health and nutrition education to the school children except for some instruction on aspects of personal hygiene and cleanliness. The school health programme is not in operation and there is no evidence of any related activities in the school environment. Lack of or inadequate interest or participation of the community and inadequate funds for fuel and transport charges are commonly mentioned as impediments for the regularity of feeding in the schools.

Special Nutrition Programme (SNP)

A supplementary feeding programme meant for children from six months to six years and expectant and nursing mothers is in operation in all districts. It is organised with the help of commun-

ity groups like women's clubs, youth clubs, etc. The type of food utilised varies with the sponsorship. These may be soya fortified bulgar wheat and vegetable oil, bulgar wheat and vegetable oil or local foods like rice/wheat and *dal*. The preparation used is mostly *dalia* and *kichidi*. Feeding is conducted for about 300 days in a year. To each feeding centre, a specific number of beneficiaries are located, but in practice the number partaking of the meal exceeds this limit and quite a proportion of the beneficiary children are above the age of six years. Supplies are often irregular. It is commonly reported that where SNP and SMP are in operation in the same village, some of the school children get a share in both the programmes. On the other hand, the participation of children below three years and mothers is very much lower than expected. The supplement is invariably used as a take-home food.

Apart from the feeding, no other related activities like health care, health and nutrition education are in evidence except in balwadis where nursery education is given mostly to the children above three years belonging to better sections of the community. Health authorities claim that the children under the SNP are being covered by their community preventive programmes like immunisation, Vitamin A prophylaxis, etc. Feeding takes place for at least 75 percent of the expected dates. In some areas organisers belonging to the women's club function as trained community health workers; in such locations, the beneficiaries seem to obtain better health care services than in those which are served by organisers who have had no training in community health work.

Upgraded SNP (UGSNP)

With a view to improve the effectiveness of SNP, additional inputs have recently been provided to certain selected centres of SNP. These include identification of severely malnourished children using the arm circumference (tape) or body weight measurements, and providing double ration for such cases. In addition, the centres are linked with neighbouring health centres for all health care services to the beneficiaries.

Observations in the field have revealed that in most cases the increased food allocation provided to permit double ration is in fact utilised not for double ration but to cover more beneficiaries. The link between the health centre and feeding centre is invariably inoperative. The beneficiaries of the feeding centre are claimed to be covered by the community preventive health programmes of the health agency but there is no evidence to substantiate this.

In both SNP and UGSNP, problems relating to poor participation of younger children (less than three years) and mothers, increased coverage of beneficiaries beyond the allocation, participation of children beyond six years of age, problems relating to availability of fuel and transport charges are common. The feeding programme is generally being viewed as a charity programme meant for poorer sections of the society.

Integrated Child Development Services (ICDS)

The basic concept underlying this programme, of providing an integrated package of services including health care, supplementary feeding, preschool education to children in the early growing period, is well accepted at all levels. However, in its implementation, several aspects like system of administration, motivation and quality of workers, poor training and ineffective supervision, poor coordination, poor participation of the community and environmental factors seem to lead to insufficiency of inputs, with the result the desired goals and objectives are not fully achieved in spite of the best efforts at all levels. The present coverage of ICDS programme is indicated in Table 11. The functionaries in the programme seem to lay more emphasis on the feeding operation than on the other aspects, possibly because this happens to be the first among the stated objectives of the programme. This is understandable, since feeding is more popular with the community and is considered as a felt need. On the other hand, health care operations are determined largely by the personal interest, knowledge and motivation of the functionaries and not so much on the demands of the community. Though participation of young mothers and children in ICDS programmes is generally better than in non-

ICDS programmes, it is still far too inadequate to make an impact on the health of this group, because the link between the *feeding centre functionaries* of the ICDS system and the health workers is weak. However, indications are that the link is now growing in strength. But if emphasis in health care is going to be limited to attaining targets with respect to immunisation and family planning, then even effective linkages with the health system may not be of much avail. What is needed is comprehensive health care including health and nutrition education.

Supplementary Feeding Programme in ICDS

Due to the local availability of a trained anganwadi worker, the feeding programme is better organised but the problems and difficulties encountered are almost the same as in the case of SNP and these relate to fuel, accommodation, transport, maintenance of food supplies, etc.. In most centres more attention is given to children above three years who participate in the pre-school education programme and these invariably are better nourished belonging to better socio-economic groups. Thus the vulnerable age groups and the poorest groups are not often reached.

Maintenance of records on the basic activities of the programme is generally adequate depending on the quality of the worker and depending on the guidance and assistance received from the supervisors. It is unfortunate, however, that the supervisors do not seem to utilise these records for monitoring and review of the programmes. Though supervision is better in the case of ICDS because of additional staff than in the other programmes, there is scope for improvement in their functioning. The supervisors and CDPOs (Child Development Project Officers) need to be given proper orientation on aspects of review of programmes. Health care provided to the beneficiaries in most cases pertains only to immunisation and this is invariably documented. Curative services, however, depend on the initiative and motivation of the health worker and other functionaries. No concerted effort is made to encourage the families to avail of the existing health services in the area. Growth monitoring is being undertaken in the ICDS programme mainly for identification and

referral of severely malnourished cases. However, even the follow up of these cases is inadequate, since linkage between the ICDS programme establishment and the local health set-up is weak. Pregnant and lactating women do not receive the needed attention and antenatal care.

Preschool Education

Preschool education in ICDS is mostly confined to children of better classes of people as the poorer sections are not always available. This activity is observed to depend on the personal interest and motivation of the anganwadi worker.

In spite of the institution base for the programme, community participation is very minimal and not very much different from other nutrition programmes. Health educational efforts by the functionaries to meet local needs are conspicuous by their absence. Even the limited amount of educational aids available with the functionaries is either not properly utilised or do not serve the local needs of the community as they are not tailored to suit the needs of the community.

Other Programmes

Apart from specific nutrition programmes, others directed towards low income groups like food subsidies (rationing), agricultural extension and development programmes, income generation and employment programmes with or without food grain distribution as part payment of wages, social welfare including health care services, all these have an indirect effect on the health nutrition status of vulnerable segments. However, their contribution to nutrition cannot be quantified in a manner that will permit assessment of their individual specific effects.

Several anti-poverty programmes (APP) have been introduced. However, these invariably benefit only a very small number of the needy families and are largely dependent on vocational skill, which is often lacking in the poorest groups.

The need to link anti-poverty programmes

with nutrition programmes has apparently not been properly appreciated at all levels. For this reason, marginal increases in income brought about by anti-poverty programmes among the unskilled poor are hardly reflected in improvement in the nutritional status of the family, especially women and children, except to help tide over emergencies and crisis situations.

The salient features regarding ongoing NP may be summarised thus:

- In all nutrition programmes — MDM, SNP, UGRSNP and ICDS — though the criteria with respect to coverage in terms of area, number of beneficiaries, number of centres, etc. may be different, the common central feature is supplementary feeding.

- The types of supplements in the different programmes are different, but apparently there is no clear or consistent policy with regard to food ingredients to be used for supplementary feeding. Feeding operations are by far the most 'popular' aspect of current nutrition programmes judged on the basis of acceptance by the community served and on public demands for further increase and expansion.

- Participation of children below three years and of mothers, even though slightly better in the ICDS programme than in the others, is still not satisfactory due to preoccupation of the mothers.

- Since the number of beneficiaries is generally in excess of what is provided for in the food allocation, the benefits of feeding are diluted; even the severely malnourished children who are expected to receive double ration do not all receive their due share. The dilution is very common in MDM.

- The really needy segments frequently do not participate.

- Inputs other than feeding, except to some extent in ICDS, are practically nil.

- Linkage with anti-poverty and development programmes is very limited.

- In general, the nutritional status of the vulnerable segments has shown no significant improvement; the expected specific effect of the nutrition programme has not been observed. Thus the mean body weights of preschool children and adult women have not shown any improvement.

- In areas where nutrition programmes are ongoing, reduction in the prevalence of severe malnutrition, including especially kwashiorkor and marasmus (Grade IV in the ICDS classification) in preschool children has been reported. This is perhaps because specially in ICDS areas efforts are made through growth monitoring to identify such really severe cases and a provision is made for their referral and management through the health agencies. Vitamin A deficiency signs are generally relatively rare in areas with NP and especially in ICDS areas due perhaps to better implementation of programmes for the prevention of Vitamin A deficiency through administration of a massive dose of Vitamin A. Clinically detectable severe anaemia was relatively rare. As may be expected, even with respect to these achievements, not all project areas have been equally successful as indicated by the evaluations carried out by the Department of Nutrition of the State.

Concluding Comments

- There is a great demand for feeding programmes on the part of the poor and many administrators themselves apparently consider them necessary. Since, however, these programmes have apparently not yielded results commensurate with the investment, it is important to make a vigorous effort to promote employment/income-generation programmes which could be perceived by the poor as being more beneficial to them in the long run and thus progressively reduce the current public demand for free feeding.

- There must be a more efficient and in-built system for monitoring and evaluating the programme – not just the inputs but the outcome as well.

programmes. A health planner conversant with procedures of management of large scale community programmes can be very useful in helping in the formulation and implementation of such programmes.

- There is scope for better planning of nutrition

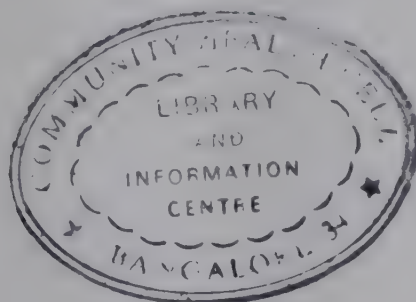


Table 1
Food Grain Production and Social Development

District	Population (lakhs)	Rice to total food grain percent	Per caput food grain per annum (Kg)	Literacy	Urban/total population percent	SC/ST to total popula- tion percent
Balasore	22.5	83.4	139.1	42.1	8.3	24.8
Bolangir	14.6	69.5	223.3	25.6	9.1	34.8
Cuttack	46.3	60.0	105.3	45.4	10.3	20.8
Dhenkanal	15.8	60.9	139.3	36.9	7.8	28.1
Ganjam	26.7	58.0	200.2	31.3	14.2	24.5
Kalahandi	13.4	50.0	306.1	19.9	11.3	56.0
Keonjhar	11.2	83.8	118.8	—	—	—
Koraput	24.8	46.8	299.1	16.1	11.3	69.3
Mayurbhanj	15.8	79.0	171.0	27.1	5.3	57.5
Phulbani	7.2	49.1	213.1	—	14.8	16.4
Puri	29.2	68.4	130.9	45.5	—	—
Sambalpur	22.8	79.4	242.1	33.8	15.5	42.6
Sundargarh	13.4	70.6	123.4	36.2	30.6*	59.8
Orissa	264.0	63.8	177.5	34.2	11.8	37.1

* Location of Rourkela Plant etc.

Source: 1) *Economic Survey of Orissa 1983-84, Bureau of Statistics and Economics, Orissa.*

2) *Orissa Agricultural Statistics 1982-83 - Directorate of Agriculture & Food Production, Orissa.*

Table 2
Estimates of Vital Events*

	1981	1982	1983
I. Estimated Birth Rate	32.6	34.4	33.7
II. Estimated Death Rate	13.1	13.2	12.5
III. Still Birth Rate	8.2	14.2	16.4
Neonatal death rate	65.5	80.4	84.9
	(41.0)	(40.5)	(40.8)
Post neonatal death rate	49.3	52.4	48.2
	(30.9)	(26.4)	(23.2)
Perinatal death rate	44.9	65.7	74.8
	(28.1)	(33.1)	(26.0)
Infant mortality rate	97.5	132.8	133.1
		** 120	
IV. Age Specific Mortality Rate (1-4 years)	14.2	11.7	11.2

* *Sample Registration Scheme, Orissa.*

State Bureau of Health Intelligence, DHS, Orissa.

** *Report on base line study BODA, 5 Districts of Orissa (1985)*

Reference period June 1980 - May 1982.

Table 3
Factors Related to Mortality in Infancy

Factors	Neonatal mortality rate	Post neonatal mortality rate	Infant mortality rate
I. Type of House			
i) Kutchha	65.2	54.9	119.2
ii) Pucca	44.2	18.9	63.1
II. Sources of Water Supply			
i) Protected	40.7	28.5	69.2
ii) Unprotected	67.6	54.5	122.1
III. Castes			
i) Scheduled Caste	75.1	71.0	146.1
ii) Scheduled Tribes	92.9	67.3	160.2
iii) Others	58.4	44.7	103.1
IV. Education of Mother			
i) Illiterate and literate without formal education	66.3	58.9	125.2
ii) Others	52.2	22.0	74.2
V. Standard of Living Index (SLI)			
i) Poor	72.3	65.3	137.6
ii) Fair	59.1	37.6	96.7
iii) Good	36.5	24.3	60.8

COHORT Rates for the period 1977-81.

Source: Report on the baseline study on fertility, mortality and related factors in Orissa 1985 — 5 districts, BODA

Table 4
Average Age of Child when Supplementary Feeding is Started
(in Months)

District	Rural	Urban	Total
Cuttack	8.8	8.2	8.8
Ganjam	9.7	7.9	9.3
Kalahandi	11.9	7.3	10.8
Phulbani	11.6	11.7	11.6
Puri	8.2	5.7	7.7
All Districts	9.8	8.1	9.5

Source: BODA, Baseline Study, 1985.

Table 5
Grades of Malnutrition (Boys and Girls) Preschool Children

Grades	Orissa	Other States
Normal* (above 90%)	14.5	16.7
Mild (75-90%)	41.0	42.4
Moderate (60-75%)	37.0	34.8
Severe (less than 60%)	7.5	6.1

*Based on NNMB Indian 'Standard'.

Source: Reports of NNMB - ICMR for the years 1978-82

Table 6
Mean Heights and Weights of Preschool Children of Orissa
1979-1982

	Boys		Girls		Boys & Girls	
	Ht (cm)	Wt (kg)	Ht (cm)	Wt (kg)	Ht (cm)	Wt (kg)
0+	62.0	6.2	60.6	5.6	61.3	5.9
1+	70.5	8.4	71.0	7.7	70.8	8.1
2+	81.1	10.1	77.6	8.8	79.4	9.5
3+	87.1	11.2	86.5	10.5	86.8	10.9
4+	92.6	12.5	92.7	12.0	92.7	12.3
5+	99.7	14.2	97.9	13.5	98.8	13.9

Source: NNMB - ICMR — Reports for the years 1978-82.

Table 7
Distribution of Grades of Malnutrition (%) (1984-1986)
Lakhimpur — ICDS

	Dec. 84	March 85	July 85	Sept. 85	Jan. 86
Total No. Examined	8152	7830	7993	7998	9198
Normal	24.3	31.1	30.4	28.8	30.4
Mild and Moderate	60.9	58.3	61.3	62.6	62.6
Severe	14.8	10.6	8.3	8.6	7.0

Table 8
Distribution of Grades of Malnutrition (1985)
Jhumpura — ICDS

	Jan. 85	March 85	July 85	Dec. 85
Total No. Examined	3278	3224	2678	3019
Normal	42.9	40.2	41.7	43.3
Mild and Moderate	54.3	56.9	55.7	53.8
Severe	2.8	2.9	2.6	2.9

Source: Monthly Reports

Table 9
Deliveries — Type of Attendant

	Scheduled Caste			Scheduled Tribe			Others		
	UTD	TD/ ANM	Relatives/ Friends	UTD	TD/ ANM	Relatives/ Friends	UTD	TD/ ANM	Relatives/ Friends
Rural	21.7	7.1	71.2	20	1.9	78.1	30	13.3	56.7
Urban	35.4	7.3	57.3	14.9	—	85.1	29.5	31.8	38.7
Total	23.1	7.1	69.8	19.9	1.9	78.2	30	14.5	55.5

UTD — Untrained Dai

TD/ANM — Trained Dai, Auxiliary Nurse Midwife

Source: Report on Baseline Study, BODA, Orissa.

Table 10
Place of Delivery

	Scheduled Caste		Scheduled Tribe		Others	
	H	I	H	I	H	I
Rural	92.9	7.1	100.0	—	89.5	10.5
Urban	74.3	25.7	81.6	18.4	56.6	43.4
Total	90.6	9.4	99.6	0.4	86.1	13.9

H — Home

I — Institution

Source: Report on Baseline Study, BODA, Orissa.

Table 11
ICDS Project Areas

Sl. No.	Name of the District	Name of the Block	No. of Anganwadi Centres
1.	Sundargarh	1) Subdega (T)	64
		2) Lahunipada (T)	94
		3) Rajagangapur (T)	91
2.	Ganjam	4) Khalikote (R)	107
		5) Kukudakhandi (R)	89
		6) Kabisuryanagar (R)	78
		7) Buguda (R)	85
		8) Gumma (T)	81
		9) Rayagada (T)	72
		(Mahendragiri)	
3.	Balasore	10) Nilagiri (T)	129
		11) Remuna (R)	115
4.	Dhenkanal	12) Kankadahad (T)	91
		13) Athamallick (R)	118
		14) Pallahara (R)	98
		15) Kishorenagar (R)	69

Table 11 continued

Table II continued

Sl. No.	Name of the District	Name of the Block	No. of Anganwadi Centres
5.	Koraput	16) Pattangi (T)	70
		17) Umerkote (R)	80
		18) Malakangiri (T)	47
6.	Puri	19) Narayanapatna (T)	39
		20) Brahmagiri (R)	86
		21) Bhubaneswar (U)	100
		22) Dasapalla (T)	107
		23) Khurda (R)	89
7.	Phulbani	24) Daringibadi (R)	60
		25) Nuagaon (T)	48
		26) Phiringia (T)	63
		27) Khajuripada (T)	54
8.	Kalahandi	28) Langigarh (T)	69
		29) Golamunda (R)	82
		30) Koksara (T)	114
		31) Sinapalli (T)	98
		32) Boden (T)	74
		33) Thuamul Rampur (T)	62
9.	Mayurbhanj	34) Joshipur (T)	107
		35) Samakhunta (T)	93
		36) Morada (T)	108
		37) Khunta (T)	74
10.	Bolangir	38) Khaparakhhol (T)	98
		39) Patnagarh (T)	135
		40) Birmeharajpur (R)	72
		41) Tureikela (R)	57
11.	Keonjhar	42) Banspal (T)	86
		43) Harichandanpur (T)	121
		44) Jhumpura (T)	101
		45) Joda (T)	92
12.	Sambalpur	46) Padmapur (R)	88
		47) Paikmal (R)	74
		48) Naktideula (T)	51
		49) Bamara (T)	93
13.	Cuttack	50) Athagarh (R)	100
		51) Salepur (R)	120
		52) Rajanagar (R)	96
		53) Rajakanika (R)	102
		54) Balikuda (R)	133
		55) Binjharpur (R)	116
		56) Sukinda (T)	114
		57) Cuttack Sadar (R)	161
		58) Raghunathpur (R)	95
Total			5210

T - Tribal R - Rural U - Urban

T - Tribal R - Rural U - Urban

Table 12
Beneficiaries Under Feeding Programmes

Sl. No.	Agency	ICDS	S.N.P.		Total (Col. 4 + 5)	Grand Total (Col. 3 + 6)	M.D.T.
			Upgraded SNP	Normal			
1	2	3	4	5	6	7	8
1.	CARE	1,75,600	2,25,000	3,43,050	5,68,050	7,43,650	5,53,000
2.	W.F.P.	65,800	—	2,62,200	2,62,200	3,28,000	—
3.	Local Food	1,68,320	—	2,16,680	2,16,680	3,85,000	1,84,000
	Total	4,09,720	2,25,000	8,21,930	10,46,930	14,56,650	7,37,000
4.	Government of India (Koraput) from 1-1-86	24,000	—	2,17,000	2,17,000	2,41,000	—
5.	CARE + W.F.P.	2,41,400	2,25,000	6,05,250	8,30,250	10,71,650	5,53,000

Table 13
Percentage of Children Attending School

District	6-9 yrs.	Male		6-9 yrs.	Female	
		10-14 yrs.	6-14 yrs.		9-14 yrs.	6-14 yrs.
Cuttack	81.8	75.5	78.6	69.1	54.3	61.2
Ganjam	53.9	56.8	55.5	38.2	26.1	31.8
Kalahandi	44.2	44.5	44.4	19.7	10.0	14.9
Phulbani	64.8	50.8	57.4	40.5	21.4	31.2
Puri	73.0	71.3	72.0	73.3	62.8	67.4

Source: Baseline Study, BODA-Orissa.

Chapter 2

Nutrition Programmes in Orissa State Current Limitations

Shanti Ghosh

The observations made here are based on visits to several villages in Orissa where nutrition and nutrition-related programmes are ongoing. The villages visited in the course of the study were those located in the Brahmapuri and Puri blocks of the Puri district and the Naugaon block of the Phulbani district. In addition, some urban centres in Bhubaneswar were also visited. In many of these centres, ICDS programmes were in operation and in some, the Special Nutrition Programmes (SNP). In three villages in the district of Puri, there were programmes being carried out by the organisation called the Rural Education and Action for Change (REACH), a voluntary agency. Preceding these visits to the villages and following on them, detailed discussions were held with several officials of the Departments of Social Welfare, Rural Reconstruction and Health.

It is not claimed that the areas visited in the course of this study are truly representative of the State as a whole. However, the observations made on the basis of these visits and the extensive discussions related to programmes ongoing in these areas may provide some indication of current deficiencies in ongoing nutrition programmes in Orissa. It must be emphasised that the attempt in this presentation is to highlight some of the major limitations which are inherent in the strategy underlying present nutrition programmes; and for this reason, the deficiencies alone are being highlighted. These criticisms should in no way be considered as a reflection on the dedication of the officers of the State who are concerned in the implementation of the programmes and the hard work which they are putting in under

rather difficult and trying conditions. These criticisms should also not obscure the fact that despite limitations in the current stage, there have been quite a few "success stories" as well.

Quite a few criticisms contained here pertain to the ICDS programme. These criticisms should not be construed as throwing doubt on the validity of the concept and the soundness of the broad approach underlying the ICDS programme as such. The ICDS programme is basically sound and provides considerable scope for the improvement of health and nutritional status of mothers and children of poor population groups. Under this programme, there is a front-line worker belonging to the village and the community who may be expected to be in a position to earn the community's full cooperation and support in programmes aimed at the improvement of their health and nutritional status. The ICDS programme is also unique in that it combines health inputs, nutritional inputs and educational inputs. As originally conceived, it was also designed to include income-generating inputs. Unfortunately, however, in view of several practical constraints, apparently it has not always been possible to operate the programme on the lines originally envisaged; and for this reason, the objectives of the programme have not often been realised in many cases. In the following pages, an attempt is made to highlight some of the distortions which have crept into the programme in the hope that attempts will be made to correct these distortions and to improve the programme in accordance with its original concepts and objectives.

Limitations of Current Nutrition and Nutrition-related Programmes

- Food supplementation has become the centre-piece of the ICDS programme now being implemented in 84 blocks of the State. A great deal of time of the anganwadi worker is now being taken up in the mechanics of food distribution and related record keeping. Other aspects of the programme, which are no less important, seem to have suffered as a result, and receded to the background.

- There is hardly any nutrition or health education except in the form of a cursory general talk once in a way. There is hardly any attempt at purposeful individual or group discussions designed to improve dietary practices and personal hygiene in the context of the family's resources and traditional beliefs. Apparently, the anganwadi worker has very little time (and possibly adequate training as well) for this in the present system.

- Though beneficiaries eligible for the food supplements are supposed to have been identified on the basis of an initial survey, in actual practice, food supplements were not being targeted to the neediest groups. This was because quite a proportion of the latter did not visit the anganwadi regularly and could not be reached. In fact, children below three years of age and quite a few eligible pregnant and lactating women did not get the supplements or any health care.

- Food supplements generally used in the programme were those donated by CARE and WFP, the ingredients of which were alien to the workers as well as to the community. Such supplements cannot obviously be used for a programme of nutrition education designed to improve dietary habits. Recently, in many areas, wheat provided by the Government of India, mixed with jaggery, was being used for supplementary feeding. This is planned to be packaged and distributed as a take home food. The millet ragi was also being used as a gruel mixed with jaggery. There were many complaints from the community that the

wheat flour and ragi flour being provided for supplementary feeding contained considerable amounts of grit and many children were, therefore, reluctant to consume such supplements.

- Since, as mentioned earlier, food supplementation seemed to have become the major activity in ICDS, in situations wherein supplies of food supplements had not reached in time or were unavailable for any reason, the programme was virtually suspended.

- Growth-monitoring: In the tribal area visited, weighing operations were fairly well done and started within a month or so after birth. In the Brahmagiri block in Puri district, however, children were not generally being weighed till after the end of the first year as mothers "will not allow their children to be weighed in the first year". Examination of the growth cards showed that though children, by and large, seemed to be able to maintain themselves within their individual growth channel, many of them were below the so-called "road to health" (between the 50th centile and third centile of the reference curve). Not much was being done for such children. Often in the case of children who had been weighed within the first month, the weight was found to be below the third centile indicating that the handicap had begun at birth; many babies must be born with low birth weights (below 2,500 g) though precise information on the extent of this problem was not available.

While anganwadi workers were often found quite proficient in weighing and charting the weights, they did not seem to understand the significance of "no gain" in weight between successive weighings and of growth faltering. They seemed concerned only with children whose weights indicate "severe malnutrition" in the chart. In short, the entire operation was thus now being used to reduce "severe malnutrition" and not to identify and correct early growth faltering. Also the workers did not seem to know what action they should take and what advice they should give in the case of children showing growth faltering. All that they seemed to know was that children showing "severe malnutrition" on the chart

qualified for a "double ration" which, as was to be expected, most of these severely ill children were in any case unable to consume.

- Health inputs in the programme varied enormously. They were good in Brahmagiri but very poor in Naugaon in Phulbani district, because neither the ANM nor the doctor had visited the area. Hardly any pregnant women had been examined and very few children under nine months had been immunised. While the drug kit was being used in some anganwadis, in at least one, it had not even been unpacked while the new replacement had already been received. There was considerable evidence of scabies and other skin infections among the community, raising doubts as to whether the ANM and the anganwadi worker had at all attempted to treat them with the drugs at their disposal.

The new medicine kit was found to have three plastic glasses and three double ended plastic spoons for salt and sugar for ORT. While the anganwadi workers knew how this gadget was to be used for ORT (they were also quite familiar with the "pinch and scoop" method) it was difficult to understand what use the spoon and glasses were going to be put to in the programme as such. It was apparently not intended that the spoon and glasses should be given to each family in need (there were not enough of these to go round); and in the event the family was not going to use it, there appeared no point in educating the family on its use.

- There was little evidence of community participation in the ICDS programme. In spite of the fact that the programme had been in operation in villages for some years, it was still found necessary for a paid helper to go round to collect the children to come to the anganwadi daily; no woman in the village apparently was coming forward to help in collecting children, in cooking and in distributing supplements and in cleaning up.

- Apart from the fact that the anganwadi worker had little time for nutrition education, it appeared that her training was not adequate enough to

equip her to impart education. For example, quite a few workers did not seem to be aware of the relationship between Vitamin A deficiency and blindness. Even when workers knew that thin watery gruel was being offered as supplement to the infant after six months in some families and that fish which was available and which the rest of the family was eating was being denied to children under two years, they did not intervene to correct these faulty feeding practices. Indeed in some instances workers themselves had apparently advised them to feed watery gruel to infants in the mistaken belief that thick gruel "would not be properly digested".

- SNP centres were being run by the Mahila Samitis. Food supplementation was again the major activity here. Food supplies in these centres were erratic. When supplements were available, beneficiaries included children from three to 10 years of age even in the "upgraded" SNP centres where supplements were expected to be targeted to the neediest. Health inputs were not in evidence.

- The organisation called Rural Education and Action for Change (REACH) was being managed by women's groups and was running 25 vocational education centres for a tribal population of 50,000. It was fascinating to see children in these centres learning in a non-formal atmosphere. Quite a few income-generation programmes had been set up; there was no free supplementary feeding and there were no doles. The community was being encouraged to be self-reliant and special vocational skills which would help them to improve their economic status were being imparted. There were also health inputs, and non-formal education programmes including elements of health care and personal hygiene.

- Several 'anti-poverty' and 'developmental programmes' such as RLEGP, NREP, IRDP and DWCRA are ongoing in the State. The last-mentioned programme lays emphasis on improving the socio-economic status of underprivileged women and includes provision for their non-formal education, vocational training, arrangements for marketing of the products they produce, ac-

cess to loans, day-care centres and creches for young children and provision of safe water and fuel nearer their houses. Unfortunately, however, there was no evidence of functional linkage between the nutrition programme of the State including the ICDS and these developmental programmes.

- There were 'fair price shops' in rural areas but the quality of the food supplied often was unsatisfactory and the supplies were erratic. The shops offered rice, wheat and sugar but no millets.

- A supplement made of roasted wheat (from

wheat supplies being currently made available by the Government of India) and jaggery (named Nutrimix) is proposed to be used in supplementary feeding. Perhaps this preparation could be packed in polythene bags and sold at nominal subsidised rates to the needy families with poor income and with children under five, pregnant and nursing women rather than being offered as a free dole. This arrangement may release the anganwadi worker of the daily chore of cooking food supplement, and give her more time for other activities, including home visits and health/nutrition education. It could also reduce the dependence which free give-away operations tend to generate in poor communities.

Chapter 3

Comments and Suggestions

C. Gopalan

3.1 The Need for a Revised Strategy

The central plank of practically all currently ongoing nutrition programmes in Orissa appears to be the supplementary feeding operation. Indeed, nutrition programmes have come to be considered as almost synonymous with supplementary feeding. It is, however, clear, on the basis of results obtained so far, that supplementary feeding programmes as such have not brought about any striking or durable improvement in the nutritional status of children in the State, despite the fairly heavy investments on them. This is not to deny that they might have helped to mitigate acute distress and alleviate the most severe and fatal forms of undernutrition in large numbers of poverty-stricken children. At best they could be looked upon as *relief operations*, but not as a desirable strategy for *durable* nutritional upliftment. To the extent to which populist supplementary feeding programmes might have helped to push the problem of poverty under the carpet and to inhibit long-range development programmes designed to correct current socio-economic inequities, they might have actually done disservice to the poor.

On the other hand, there is no doubt that at present there exists a great public demand for these feeding programmes among the poorest sections of the population; and, despite the indifferent outcome, it may perhaps be politically and practically inexpedient for the Government to withdraw these programmes totally or to drastically prune them *immediately* in the context of continuing dire poverty, though REACH, which is working in a poor tribal block, has shown that development programmes can be run without a

dole. Under the circumstances, it is important to consider how best the limited resources currently available for supplementary feeding can be optimally utilised in order to facilitate enduring nutritional upliftment. Supplementary feeding must become a part of an overall development strategy.

Limitations of supplementary feeding programmes:

If the inherent limitations of supplementary feeding programmes are appreciated, it will be clear that, however efficiently executed, they cannot by themselves work wonders. According to the nutrition policy paper prepared by the State for the Seventh Five Year Plan, nearly two-thirds of the population of the State is below the poverty line. It is estimated that the total population of pregnant women, nursing mothers and children under five years of age, who could be considered 'eligible' for the benefit of supplementary feeding programmes as per the criterion of poverty, would exceed 30 lakh. As against this, available resources including food donated by foreign agencies permit provision of a supplement of less than 300 calories and less than 10 gm proteins daily to just over 14 lakh of 'eligible' beneficiaries — and that too for only 156 days in the year (except in the case of ICDS). Moreover, especially among the poorest sections on whom the supplement may be expected to make an impact, it seems possible that the supplement becomes actually a substitute (wholly or partially) for a part of the home meal. These limitations cannot be overcome by a further extension of the operation on the same lines. The need for a revised strategy must be obvious. However, the argument against sole reliance on supplementary feeding programmes as the answer to the problem of undernutrition is

not that resources for adequate coverage of the undernourished population with such programmes are lacking but that it does not address the basic causes of undernutrition but only seeks to relieve its symptoms.

Undernutrition is not a "specific" disease that can be controlled by an isolated vertical programme like "supplementary feeding". It is an outstanding manifestation of the "poverty syndrome", the invariable attributes of which are: low family income, poor environment, inadequate family diets, inadequate access to health care and poor levels of education. All these attributes contribute either directly or indirectly to the evolution of undernutrition. Durable improvement in the nutritional status of poverty-stricken people can only be brought about as part and parcel of their socio-economic development, which will be achieved, not through isolated programmes which address just one or another dimension of poverty but through a multi-pronged, integrated attack on all its major attributes.

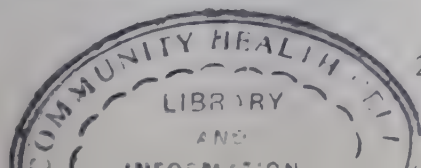
On the other hand, a well-targeted supplementary feeding programme can be judiciously used as a part of (and as an "entry point" to facilitate and reinforce the benefits of) an "integrated programme of Human Resources Development" which could include sub-programmes aimed at: poverty alleviation, income-generation, promotion of literacy (especially female literacy), ensuring prompt and adequate health care, and encouraging family planning. When these mutually reinforcing sub-programmes effectively converge on a target poor population, the supplementary feeding component will become progressively unnecessary; the community may be expected to become increasingly self-reliant and may no longer wish to (or need to) depend on a free dole. The right strategy then would be to use the rather expensive "populist" instrument of supplementary feeding programmes judiciously, sparingly and effectively, in order to trigger, facilitate and initially sustain an ascending spiral of self-generating socio-economic development of the community and not just as a perpetual (inadequate) relief operation to partially mitigate severe undernutrition in some part of the population.

Even in situations where integrated Human Resources Development programmes are ongoing, nutritional concern must not stop with supplementary feeding; it must be ensured that nutrition finds appropriate focus in all components of the integrated programme. Increased family income need not automatically be reflected in better nutrition of women and children in the family (it could be frittered away in increased alcohol consumption). It will be important to ensure that non-formal education programmes lay stress on personal hygiene, improved home-environment, optimal use of health care facilities, improved child-rearing and family planning practices and maximal use of locally available inexpensive foods for the improvement of family diets. Supplementary feeding programmes could be wisely used to achieve these objectives and to improve antenatal care, immunisation coverage and for early detection and prompt correction of growth-faltering in infancy and early childhood. Indeed, if supplementary feeding programmes are not used for these objectives, the enormous expenditure involved in undertaking them will hardly be justified.

Current Deficiencies

Apart from the near-total reliance on supplementary feeding programmes, which are currently neither well-targeted to the under three year age group nor well-integrated with other mutually reinforcing inputs, there are other limitations in the present systems that seem to require attention. Many of these have already been referred to in the earlier part of this Report and are being briefly recapitulated here, and can be classified under five broad heads:

(1) **Inadequacies in the present ICDS System** both with respect to content, delivery and community involvement: While anganwadis in the ICDS have undoubtedly contributed to significant improvement in immunisation coverage, the non-formal education component is too ritualistic to be effective, and is not sufficiently intensive and purposeful. It is inadequate both with respect to content and communication methodology. The anganwadi workers, in many cases, seem to be rooted to the anganwadi centres and rarely under-



take domiciliary visits, partly because quite a number of them do not reside in the village and partly for the reason that they are overburdened with food supplementation and record-keeping operations. There would seem to be considerable scope for improvement of training of the workers and for better supportive supervision in the ICDS system. Functional linkages with the health system are inadequate and with other developmental activities nonexistent. Active community participation is not much in evidence. Despite these general limitations, it must be pointed out that excellent work is being done in some anganwadis by motivated workers, and these "success" centres could well serve as models and pace-setters for the rest.

(2) Inadequacies in the Primary Health Care System: The outreach and quality of Primary Health Care is a major determinant of the nutritional status of rural communities, especially where it is effectively reinforced by the ICDS and other special nutrition programmes. Apart from prevention and control of morbidity, the primary health care system includes important nutrition components — health/nutrition education, periodic supplementation of Vitamin A concentrate to children under three years, and iron-folate supplementation to pregnant and nursing women and children.

The deficiencies with respect to primary health care not just in Orissa, but in many other parts of the country, stem from the following inadequacies:

- Lack of adequate training of the PHC doctor in man-management; community contact and communication. The PHC doctor is the leader of a team of nearly 40 health personnel. He should know (i) how his team can be most optimally deployed; (ii) what type of training, support and supervision the team members would need; and (iii) how effective and fruitful partnership between the community and the health services could be forged. There is nothing in the present curriculum of training of the PHC doctor (who is usually the most junior person in the health services

hierarchy) which could really equip him for these challenging tasks. It may be repeated here that these criticisms as well as others that follow are not unique to Orissa but apply to health systems in many other States as well.

- Lack of a proper system for identification of "households at risk" which merit priority. If there is a system for identifying households at risk (that is those with an under-five child, a pregnant or lactating woman), a programme of meaningful domiciliary visits would become possible. No health worker can possibly visit *all* households notionally under his/her charge even once in several weeks.

- Logistic bottlenecks with respect to timely supplies of essential drugs, replacement of drug kits, audio-visual aids for health/nutrition education and Vitamin A hamper programmes both at the PHC and sub-centre levels.

- Restricted mobility of the multi-purpose worker (particularly of the ANM) for want of facilities for quick transport. An inexpensive input like a bicycle could go a long way in increasing the effectiveness of ANMs. In some places, loans for purchase of cycles by ANMs are given but the ANMs have to be "confirmed" in service before they qualify for this facility, and the confirmation process could take several years. It is unrealistic to expect ANMs to trek several kilometres especially in hot and rainy months to carry out their village visits.

3) Inadequacies with respect to functional linkages between health care service and special nutrition and child development programmes including ICDS: If the anganwadi worker and the ANM work in concert, both the ICDS and health care programmes would be greatly strengthened; but unfortunately such mutual reinforcement is not very much evident at present. Where the anganwadi worker is in position, there may indeed be no need for a Village Health Volunteer (officially designated as such within the health system) especially considering that the level of training and

basic education of the anganwadi worker is much better. The anganwadi worker must be one who resides in the village and it must be considered as part of her duties to furnish to the ANM during her visits the list of "priority" at-risk households meriting immediate attention and to accompany her during these house visits. These functionaries must work together as a team and not at cross purposes. Such functional unification of the ICDS and health systems at the village level is absolutely essential for the full success of ICDS and health care programmes. The anganwadi worker must be empowered to refer cases requiring prompt medical attention to the sub-centres or the PHC and her recommendation must be entitled to prompt consideration.

4) Lack of coordination of developmental efforts: In Orissa, currently, several rural developmental programmes and anti-poverty programmes are being attempted, and the investments therein are quite impressive. Unfortunately, there does not appear to be a mechanism for: (a) coordination of these multi-developmental and income-generating programmes themselves at the grass-roots level to ensure that their benefits are mutually reinforced and effectively converge on target communities, and (b) coordination of developmental and income generation programmes on the one hand, and health/nutrition programmes on the other. The concept of integrated human resources development implicit in the creation of the Ministry of Human Resources Development at the Centre, encompassing the sectors of health, education and social welfare, is not being reflected at the field level – the level which matters most.

5) Lack of community participation: A major failing has been the near-total non-involvement of the community in programmes aimed at its own social and economic regeneration. Nutrition upliftment (as indeed other developmental activities) has come to be looked upon as a "facility" to be provided by the Government. The concept that the central thrust in developmental efforts must be directed towards promotion of self-reliance (towards helping the community to help itself) has apparently been largely lost sight of.

Indeed, nutrition programmes as they have been operated so far, far from generating self-reliance, could have actually promoted dependence. To the extent that communities have thus remained dormant and passive, implementation too has suffered through "non-response" on the part of "recipients" and lack of accountability on the part of "providers" which a vigilant community could have enforced.

3.2 Outline of a Revised Strategy

Our proposal for a revised strategy can be really considered under two broad heads:

- Initiation of active steps for strengthening the existing systems such as the ICDS, SNP and Primary Health Care in order that the distortions and the deficiencies that have been identified therein could be corrected; and bringing about effective functional linkages between these systems, so that unnecessary overlapping and duplication is avoided and mutual reinforcement is ensured.
- Setting up an innovative integrated Human Resources Development project in two districts of the State (in the first phase). These projects could include very strong health and nutrition components in addition to income generation and education (especially female education and non-formal education). These integrated project areas will serve as demonstration-cum-training areas.

Strengthening the existing systems

The shortcomings in the existing systems have been discussed earlier in this Report and need not be repeated at length here again. It is important that the staff at all levels who are engaged in the present health and nutrition programmes obtain a total picture of their respective programmes and of the importance of the inter-linkages between the different functionaries. There must be opportunities for the training of the functionaries of each system as a composite team and for their frequent collective reorientation and periodic retraining so that these functionaries are

trained and motivated to act as a team. This will serve to overcome many of the logistic and functional bottlenecks in these programmes. Fruitful linkages between the different systems should be forged. This can only be done effectively under the auspices of the Mahila Mandals (Village Women's Associations) which can provide the meeting ground for interaction of the different functionaries. The need for encouraging the setting up of such viable Mahila Mandals is being discussed later.

Special efforts must be made to strengthen the implementation of the nonformal education component of the ICDS; and a programme of domiciliary visits by the anganwadi workers working in concert with the auxiliary nurse midwives of the health system must become the major health activity at the village levels for this purpose. Women's active involvement and participation in adult literacy and income-generation programmes is an essential precondition for the success of all developmental efforts including nutritional upliftment of the community.

The anganwadis must also concentrate on children under three years (and not on older children as is generally the case at present) and on pregnant and lactating women. This cannot be achieved if the anganwadi workers are rooted to the anganwadis most of the time and do not undertake home visits.

Innovative ways of ensuring that the supplementary feeding programme does not become the centrepiece of ICDS and the SNP to the detriment of the other components are necessary. In fact, it should be ensured that supplementary feeding should be undertaken only when health, educational and other developmental inputs can also be offered as major components of the programme.

Arrangements could be made for the preparation of ready-to-eat supplements based on locally available foods (such as roasted wheat and jaggery mixture). This could be entrusted to the

women of the village working under the auspices of the Mahila Mandals. The preparations could be neatly packed in polythene packs and offered at very nominal prices to the families. This could be considered as one of the income-generating activities of the Mahila Mandals. Efforts must be made to move away from the system of free doles which only breed dependence and not self-reliance. These and some other suggestions are considered in other sections of this Report as well.

Model integrated human resource development programme in two districts

We recommend the adoption of a revised strategy of "Integrated Human Resources Development" which will include strong nutrition and health components in addition to education and income-generation components in at least two districts of the State. This strategy need not necessarily involve the initiation of new schemes, but the bringing together of the multiplicity of disjointed developmental programmes, for each of which financial sanction is already available. However, this strategy will definitely involve (a) micro-level planning in order to identify, in consultation with the community at the village, block and district levels, the optimal mix of appropriate developmental programmes, and to decide on the mechanics of their implementation as a composite integrated package, and (b) as a necessary precondition the setting up of an active and viable village-level community organisation, preferably a women's organisation which will act as the nodal institution that will be actively concerned in the formulation and harmonious implementation of the programmes as a united activity.

● **Setting up women's organisations (Mahila Mandals) at the village level.** We consider that the most important requirement for the success of nutrition programmes and indeed of an integrated Human Resources Development Programme is the active involvement/participation of the community and especially of women. The formation of voluntary women's organisations at the village level must be encouraged and a small seed grant may be initially provided to enable the organisation in each village to develop its activities. It is important that the underprivileged sections of the

community are adequately represented in the organisation's membership and among office-bearers. Side by side with such women's organisations, village committees which will include the school teacher and the village elders could also be set up to reinforce and complement the efforts of the Mahila Mandals. Such technical help and guidance as may be needed by these village organisations may also be provided by the Government services, and opportunities for regular and frequent interaction between the Mahila Mandal representatives and the Government service personnel must be encouraged. There must be a genuine effort at creating an atmosphere of "partnership for progress" between the community as represented by the village women's organisations and the Government services.

An association (union or federation) of village Mahila Mandals may be constituted at each taluk level, and at the district level, a Mahila Mandals' Association can be formed under the auspices of a district women's welfare cooperative society. Such a society can help village women's organisations in obtaining technical support and guidance for their programmes and in marketing the products manufactured by the women at the village level.

Mahila Mandals must be enabled to take up income-generating activities such as bakery units, small trades, vegetable vending, weaving, basket-making, rope-making, paper-making and tailoring, knitting etc.

Village level milk cooperative societies can also be organised and credit facilities and facilities for marketing milk, veterinary services, provision of fodder and feed may be extended as part of agricultural extension services. The village level milk cooperative societies can also be affiliated to a federation of milk cooperatives at district level.

Voluntary agencies could make a valuable contribution in assisting women's organisations in villages in obtaining loans from banks and in facilitating their activities, and generally acting as

a link between Government services and village women's organisations.

An important activity that may be assigned to the Mahila Mandals is the fabrication of a ready-to-eat supplement that could be used for the supplementary feeding component of ICDS in anganwadis. This could become an important income-generating activity. A seed grant to the Mahila Mandal for procuring equipment and raw material for this purpose could be made. It is understood that the Government of Orissa is already thinking on the lines of preparing a ready-to-eat supplement based on roasted wheat (donated by the Government of India) and jaggery. The Mahila Mandal could take on the activity of preparing the food and packaging in polythene bags for use. This activity could provide employment opportunities to women. Through proper training of personnel and the use of labour-saving devices and through supportive quality control, this could become not only an income-generating activity but also a method of educating the community on the maximal effective use of locally available foods for improving the nutritional status of children. The supplements could be given to children (under three) and pregnant and nursing women of needy families on nominal payment at subsidised prices at the ICDS anganwadi centres. Through such an arrangement, supplementary feeding instead of being a charity operation as at present will become an income-generating and educational activity. The anganwadi worker will be relieved of her chores of preparing supplements and will have more time for education and health inputs.

● **Components of the integrated package:** The Integrated Human Resources Development Project could include the following items:

(1) Programmes to improve safe water supply and environmental hygiene such as chlorination of open wells and provision of pulleys to open wells, drainage, provision of sanitary latrines at least in the village schools.

(2) Intensive health programmes which will include vigorous implementation of immunisation, training of *dais*, nutrition programmes such as periodic distribution of Vitamin A and iron

folate tablets to pregnant and lactating mothers, school health service and oral hydration, all of them organised with the active cooperation and participation of the Mahila Mandals and health functionaries at the village and PHC levels.

(3) Improved integrated child development programmes (correcting the present distortions).

(4) Income-generation activities, specially activities designed to provide vocational training and the development of agro-based industries in the villages including production of weaning foods for nutrition programmes.

(5) Programmes for nonformal education of mothers and the community in general. Integrated rural development projects on these lines have been attempted in several areas. The Bidar Integrated Rural Development project (Project BIRD) which is jointly being operated by the Government of Karnataka, Government of India and the Unicef could serve as an example in this regard. As was pointed out earlier, practically all the programmes listed above are those for which financial provision may have already been made. The additional outlay needed may be small. What will, however, be necessary is a mechanism for the integration of these efforts and their effective implementation under the unified auspices of the village community organisation with service/technical support from the Government.

It is not being suggested that all components listed here must necessarily form part of the Integrated Human Resources Development programme in every village. The mix of components will have to be decided for each village and block on the basis of its own special requirements and facilities. It is here that consultation with the local community becomes important.

This strategy will need (a) micro-level planning in order to identify, in consultation with the community, at the village, block and district levels the components and optimal mix of developmental programmes and to decide on the mechanics of their implementation as a composite integrated package; and (b) as a necessary precondition, the setting up of active and viable village-level community organisations, preferably women's organisations which will act as the nodal institutions that

will be actively concerned in the formulation and harmonious implementation of the programme as a united community activity. Ultimately it is only when the community itself takes the lead and plays the dominant role (and the Government helps it to do so) that developmental programmes in the village will become functionally integrated. The onus for achieving functional integration cannot be entirely left to the bureaucracy. Voluntary agencies (NGOs) can play an important role here and they should be encouraged and enabled to do so.

Two special sub-programmes that could find a place under the Integrated Human Resources Development Programme in the two model districts are: (1) Programme for "Home Science" and vocational training for rural girls and women; (2) Programme for Community Contact and Health Education through the rural school system.

We will provide a brief outline of these two proposed sub-programmes. We specially mention these sub-programmes here because efforts of this nature do not find adequate focus in our developmental plans.

Programme for home science and vocational training for rural girls and women

Socio-economic transformation of our poor rural communities and their nutritional upliftment will be greatly facilitated by an imaginative programme of education and training addressed to our girls and young women in the rural areas. Through such programmes, we can develop a new generation of educated, emancipated and enlightened young women who, in their turn, will be able to contribute to the improvement of the quality of life of their families. A good percentage of rural girls now never enter schools. Of those who enter, a high proportion drop out well before reaching the fifth standard. Thus, a great majority of our girls reach their adolescence mostly as illiterates or semi-literates with no skills and no practical knowledge which could prepare them for their future roles.

The Nutrition Foundation of India had drawn up a detailed proposal in this regard (*Bull. NFI* – 5.1. 1984). The possibility of including a special project on the basis of this proposal as part of the integrated project in two administrative districts in Orissa could be explored. In the implementation of this project, the Mahila Mandals must obviously play a major role. This special project may be briefly described as follows:

Education for better living: The girls will be given practical (not theoretical) education in the following:

- Personal hygiene and environmental sanitation.
- Nutrition — the value of different local foods and the types of nutritious recipes that can be fashioned out of them, preparation of inexpensive balanced diets out of foods available in the village.
- New agricultural technology for increased food production, effective and economic use of fertilisers, safe and timely use of pesticides.
- Simple post-harvest technology for avoidance of food waste during storage, techniques for preservation and storage of perishable foods.
- Simple agro-based industrial technology.
- Sex education and family planning.
- Care in pregnancy and lactation.
- Care of the new-born and infant feeding and rearing.
- Child care and development.
- Home nursing and first-aid.
- Available health care facilities and how they could be used.
- Immunisation, care of diarrhoeas (oral rehydration) and diseases of children, simple remedies for common ailments.
- Importance of education of children, and
- Legal rights of women as citizens, and their obligations.

This course, which could also be termed as “Home Science for Rural Girls”, will extend to two years. The girls will spend half a day on each of the six working days of the week in their school during this period. This will leave them free for half the day to help their parents.

All this instruction must be imparted through audio-visual aids and not through books and written material, since most of these girls will be illiterates.

The training of the instructors, who must be women, is extremely important. The National Council of Education Research and Training and the National Institute of Nutrition, Hyderabad, may join hands in training the teachers, providing them with an instruction manual, and in developing the appropriate audio-visual aids. The Central Health Education Bureau can also assist.

Vocational training: The girls will also receive training in simple crafts. The craft(s) chosen for a school must obviously be appropriate to the location, the appropriateness being determined by tradition, local acceptability and marketability of the product manufactured. A wide range of crafts may be considered, such as rope-knitting, basket-weaving, mirror-work, doll-making, tailoring, handloom, bee-keeping, silk-worm farming, cane and bamboo craft, embroidery, knitting, wooden handicrafts, ceramics and potteries, preparation of “processed” foods (jam, jellies, pickles) etc. The inputs needed for each craft, and therefore for each school, must be decided separately. All this will involve a great deal of micro-level planning on the one hand, and also a great deal of overall coordination on the other.

The Government has already with them considerable information in this regard and considerable work in this area has been done and a great deal of experience is already available. Offices such as that of the Development Commissioner for Small Scale Industries, and organisations such as the All India Handloom Board, the All India Handicrafts Board, the Khadi and Village Industries Commission, the Coir Board, the Central Silk Board, and the Educational and Vocational Guidance Unit of the NCERT and the corresponding State level organisations could be brought together in a Coordination Board which can help in the organisation of vocational training and in the recruitment and training of instructors (who must be women). The experience gained by

such organisations as Sewa and Lijjat Papad etc., must also be utilised for this purpose. The entire vocational training programme must be backed up by necessary management and marketing expertise of the highest order available. This is an essential requirement for the success of the programme. An organisation at the district level for marketing the products manufactured must be set up. This could be a district Women's Welfare Cooperative Society under the auspices of an association of village Mahila Mandals on the lines of what has been attempted under Project BIRD in Karnataka.

The Vocational Training could run concurrently with the "educational part" of the programme ("education for better living"). The girls could spend half their time in school every day in vocational training and the other half in the "educational programme". The vocational training will also last for two years.

Community contact programme through the rural school system

An imaginative programme for the use of the rural schools for community contact and for mounting a purposeful programme of health and nutrition education could be organised. Under this programme, the rural school could be used as an important forum for bringing about a true integration of health, nutrition and other development programmes which are operating at the village level. At present, our rural schools are by and large isolated appendices of our villages. This situation must be corrected. If close interaction between the school system, village community and the different functionaries engaged in health/nutrition and development programmes in the villages can be forged, the school will become an integral part of the life of the community and a forceful instrument for its social, cultural and economic development. A detailed programme for the use of the rural school system for community health/nutrition education has been described by the Nutrition Foundation of India in its Report "Nutrition and Health Education through the Rural School System" (*Scientific Report 3, NFI, 1984*). It is recommended that a programme on these lines could be included as part of the integrated

human resources development project in the model districts.

Monitoring and evaluation: Arrangements for monitoring and evaluation are essential to ensure that the programme is moving on the right lines. Apart from arrangements for "internal" monitoring by the project staff themselves, there should also be arrangements for independent and objective external monitoring at periodic intervals.

The two "model districts", in which an Integrated Human Resources Development programme is introduced, could serve as demonstration-cum-training centres for the rest of the State. Depending on the experience gained, the programme could be extended to other districts in a phased manner.

Concluding comments

Of the several sub-programmes discussed in the Integrated Human Resources strategy considered here, the following are directly related to nutritional upliftment:

(1) Vigorous implementation of programmes for control of nutritional blindness and anaemia through periodic distribution of Vitamin A capsules and distribution of iron and folate tablets to pregnant women and children.

(2) Nutrition and health education programmes organised through child care centres, the health system and the school system with a view to promote optimal child rearing practices, personal hygiene, environmental sanitation, good dietary habits and preventive and promotive health care.

(3) Well-targeted supplementary feeding programmes directed to needy children below three years and pregnant and lactating women, carried out purely as a temporary interim measure among extremely poverty-stricken groups as part of integrated efforts at their development. Several other sub-programmes discussed in the above strategy, however, would seem not directly related to nutritional upliftment. However, as was pointed out earlier, all these sub-programmes contribute, in a substantial measure, to the im-

provement of the health and nutritional status of the community through bringing about a change in the living habits, dietary practices and through eradication of the several constraints imposed by poverty.

It must be emphasised finally that an effort of this nature can succeed, and Orissa can show the way in this regard, only through a real change in the "administrative culture". The current compartmentalised thinking and narrow sectoral functioning must be subordinated to a genuine desire for the promotion of all-round development; the present distrust which psychologically divides the bureaucracy and government services from the village community must give place to a true

partnership for progress in which there is no superior "provider" and no humble "recipient". The community must be allowed to come into its own, stand up on its own feet and be helped to help itself. Non-governmental voluntary organisations should play an important role in this regard.

It is through such a strategy aimed at all-round socio-economic development backed by health/nutrition inputs including especially non-formal education of village communities that nutritional upliftment can be achieved. Orissa, probably the poorest State in the country, could become the pace-setter in this regard if it dares to be innovative.



